

**IN THE CLAIMS:**

1-12. (Cancelled).

13. (Currently Amended) An arrangement for directly controlling the movement of a zoom system in a stereo microscope, comprising:

first and second direct driving motors in the stereo microscope for at least one moving lens system having first and second moving lenses, the driving motors operable to control respective first and second moving lenses, each direct driving motor having a step-wise resolution;

a control unit operable to control wherein the driving motors are controlled by a control unit which reads and to read calculated pre-stored values of reference points from a mathematical controlling curve for simultaneously directing the movement of the at least one moving lens system first and second moving lenses by controlling the driving motors in a corresponding manner to cover a different number of discrete individual steps per unit of time according to the mathematical controlling curve without necessitating use of mechanical generation of the mathematical controlling curve.

14. (Cancelled)

15. (Currently Amended) The arrangement according to claim 13, wherein the first and second moving lenses lens members which comprise the at least one moving lens system and are provided as lens pairs in a Greenough type stereo microscope or telescope type stereo microscope.

16. (Cancelled).

17. (Previously Presented) The arrangement according to claim 13, wherein the driving motors are linear drives.

18. (Original) The arrangement according to claim 17, wherein the linear drives are arranged in the stereo microscope housing.

19. (Previously Presented) The arrangement according to claim 18, wherein the driving motors are arranged between lens pairs which comprise the at least one moving lens system.

20. (Previously Presented) The arrangement according to claim 13, wherein a plurality of moving lens members which comprise the at least one moving lens system and are controlled jointly.

21. (Previously Presented) The arrangement according to claim 13, wherein at least two lens members which comprise the at least one moving lens system are driven separately.

22. (Previously Presented) The arrangement according to claim 13, wherein a linear magnification that is adjusted is determined and displayed during the controlling of the zoom system.

23. (Previously Presented) The arrangement according to claim 13, wherein at least one control unit is used for motorized zoom adjustment and for motorized focusing of

the microscope.

24. (cancelled).

25. (Currently Amended) An arrangement for directly controlling the movement of a zoom system in a stereo microscope, comprising:

~~at least one pair of movable lenses for stereo imaging and operable to move in a non-parallel manner with respect to each other;~~

first and second direct driving motors arranged in the stereo microscope and operable to respectively move the pair of first and second movable lenses;

a memory that stores values of calculated reference points that represent a mathematical controlling curve for directing movement of the pair of first and second movable lenses; and

a control unit which reads the stored values from the memory and controls the direct driving motors in a corresponding manner without using mechanical generation of the mathematical controlling curve and without using any feedback with respect to the position of the direct driving motors, the control unit operable to perform an initialization of the first and second direct driving motors to find a predetermined position upon power-up.

26. (New) The arrangement according to claim 25, wherein the control unit performs the initialization of the first and second direct driving motors to find a zero point for the two motors.

27. (New) The arrangement according to claim 26, wherein the initialization includes

moving the two motors to their lowest magnification.

28. (New) The arrangement according to claim 25, wherein:

the first and second direct driving motors are controllable in a step-wise manner;  
the control unit reads the stored values from the memory and simultaneously  
directs the movement of the first and second moving lenses by controlling the driving  
motors in a corresponding manner to cover a different number of discrete individual  
steps per unit of time according to the mathematical controlling curve to always provide  
correct focusing during movement of the first and second moving lenses.

29. (New) The arrangement according to claim 28, wherein the control unit is  
operable to perform an initialization of the first and second direct driving motors to find a  
predetermined position upon power-up.

30. (New) The arrangement according to claim 29, wherein the control unit performs  
the initialization of the first and second direct driving motors to find a zero point for the  
two motors.

31. (New) The arrangement according to claim 30, wherein the initialization includes  
moving the two motors to their lowest magnification.